**Amendments to the SPECIFICATION:**

Without prejudice, please amend the Substitute Specification as follows:

Please amend the paragraph beginning at page 1, line 25 (and ending at page 2, line 5) of the Substitute Specification as follows:

--Figure 1 shows a device for determining the load that may be drawn from an energy store, especially from a vehicle battery, up to a prespecified cutoff criterion. The device includes a state variable and parameter estimator 1, and a load predictor 2, in which the mathematical energy storage model is stored. State variable and parameter estimator 1 is used to calculate state variables Z and/or parameters P from current operating variables of the battery, namely the battery voltage $U_{Batt}$, the battery current $I_{Batt}$ and the battery temperature $T_{Batt}$, based on which load predictor 2 calculates the desired information, such as the load $Q_e$ that may be drawn from the battery, or other variables, such as the time $t_e$ to the time of reaching a cutoff criterion or load state SOC. In addition, a discharge current profile [[$I_{Batt}$,Entl]] $\underline{I_{Batt,entl}}$ and a temperature progression [[$T_{Batt}$,Entl]] $\underline{T_{Batt,entl}}$ may be supplied to load predictor 2.--.

Please amend the paragraph beginning at page 2, line 25 (and ending at page 2, line 26) of the Substitute Specification as follows:

--[[R]] $\underline{R_i}(U_{CO}, U_e, T_{Batt})$ ohmic internal resistance, dependent on open-circuit voltage [[Uco]] $\underline{U_{CO}}$, electrolyte voltage $U_e$ and acid temperature $T_{Batt}$--.

Please amend the paragraph beginning at page 3, line 1 (and ending at page 3, line 3) of the Substitute Specification as follows:

--$U_D$ ($I_{Batt}$, $T_{Batt}$) stationary charge transfer polarization at the positive electrode of the battery ($U_{Dp}$) and the ~~negatice~~ negative electrode [[($U_{D'}$)]] $\underline{(U_{Dn})}$, dependent on battery current $I_{Batt}$ and the acid temperature $T_{Batt}$--.

Please amend the paragraph beginning at page 3, line 9 (and ending at page 3, line 9) of the Substitute Specification as follows:

--$R_i$ ($U_{CO}$,[[.]] $U_e$, $T_{Batt}$) = $R_{i0}$ ($T_{Batt}$) * (1 + $R_{I,fakt}$ * ($U_{COmax} - U_{CO}$)/($U_e - U_{e,\,grenz}$)),--.

Please amend the paragraph beginning at page 3, line 9 (and ending at page 3, line 9) of the Substitute Specification as follows:

--[[$R_{Ifakt}$]] $\underline{R_{I,fakt}}$ characteristics map parameter--.

Please amend the paragraph beginning at page 5, line 1 (and ending at page 5, line 6) of the Substitute Specification as follows:

--According to one preferred specific embodiment of the present invention, an error is ascertained between an operating variable ($U_{Batt}$, $I_{Batt}$) of the energy storage device and an operating variable [[($U_{Batt}$, $I_{Batt}$)]] $\underline{(U_{Batt^\wedge}, I_{Batt^\wedge})}$ calculated by a submodel, and is coupled back into the respective submodel (self-feedback). Because of the self-feedback, the state variables and parameters that are to be calculated may be adapted to the actual state of the energy storage device.--.

Please amend the paragraph beginning at page 7, line 1 (and ending at page 7, line 9) of the Substitute Specification as follows:

--State variable and parameter estimator 1 shown in Figure [[1]] <u>3a</u> includes at its input continuously measured battery values, in the present case, battery current $I_{Batt}$ (optionally, battery voltage $U_{Batt}$ may also be supplied) and battery temperature $T_{Batt}$. Battery current $I_{Batt}$ is restricted by suitable lowpass, highpass or bandpass filters 6, 7, 8, 9 respectively to frequency range f1, f2, in which the respective submodel 4, 5 is valid. A submodel 4, 5 (e.g. submodel 4), which is valid, for instance, in a frequency range f1 of more than 1 kHz, has, in the present case, a preconnected highpass filter 6. For example, a lowpass filter 7, 9 may be preconnected to submodel 5. If a submodel 4, 5 covers the entire frequency range f, input filters 6, 9 for current and voltage may be omitted.--.

Please amend the paragraph beginning at page 7, line 16 (and ending at page 7, line 20) of the Substitute Specification as follows:

--State variable and parameter estimator 1 includes difference nodes 17, 18 at which an error (differential signal) is formed from the estimated battery state variable $U_{Batt,1^\wedge}$, $U_{Batt,2^\wedge}$ and the respectively measured battery state variable $U_{Batt,1}$, $U_{Batt,2}$. The ascertained errors ($U_{Batt,1} - U_{Batt,1^\wedge}$, $U_{Batt,2} - U_{Batt,2^\wedge}$, ...) are then in each case supplied to a weighting unit [[1.0]] <u>10</u>, 12 and conducted to adding nodes 14, 15.--.

Please amend the paragraph beginning at page 8, line 1 (and ending at page 8, line 3) of the Substitute Specification as follows:

$$--Z_{1,j,k+1} = f(Z_{j,k}, P_{j,k}, I_{Batt,j,k}, T_{Batt,k}) + \underline{\sum_{i=j...n} k_{z1,i,j}}\ [[\Sigma k_{z1,I,j}]] * (U_{Batt,i,k}\ \cancel{i=j...n} - U_{Batt,i,k^\wedge})--.$$

Please amend the paragraph beginning at page 8, line 5 (and ending at page 8, line 7) of the Substitute Specification as follows:

--In this context, f $(Z_{j,k}[[r]]\underline{,}\ P_{j,k}\underline{,}\ I_{Batt[[\cdot]],j,k}\underline{,}\ T_{Batt,k})$ is the righthand side of a state difference equation for state variable $Z_{1,j}$ of the jth submodel having the input variables: filtered battery current $I_{Batt,j,k}$ and battery temperature $T_{Batt,k}$ as well as the parameter vector $P_{j,k}$ in the kth time step.--.

Please amend the paragraph beginning at page 8, line 11 (and ending at page 8, line 12) of the Substitute Specification as follows:

$$--P_{1,j,k} + 1 = P_{1,j,k} + \underline{\sum_{i=j...n} k_{P1,i,j}}\ [[\Sigma kP_{1,i,j}]] * (U_{Batt,i,k} - U_{Batt,i,k^\wedge})\ \cancel{i=j...n}--.$$

Please amend the paragraph beginning at page 8, line 14 (and ending at page 8, line 17) of the Substitute Specification as follows:

--The amplifications $k_{i,j}$ of weighting units 10-13 may be ascertained in a submodel 4, 5 in the case of a ~~Luneberg~~ Luenberg observer by pole specification, and if a Kalman filter is used for submodels 4, 5, by minimization of a quality criterion such as, for instance, the minimum estimating error variance.--.

Please amend the paragraph beginning at page 8, line 25 (and ending at page 8, line 31) of the Substitute Specification as follows:

--In the system shown in Figure 3a, battery current [[IBdtt]] $\underline{I_{Batt}}$ is supplied to state variable and parameter estimator 1. According to another specific embodiment according to Figure 3b, submodels 4, [[6]] 5 may also be supplied with a (filtered) battery voltage $U_{Batt}$ as input variable. Submodels 4, 5 would, in this case, estimate a battery current $[[U_{Batt^\wedge}]]$ $\underline{I_{Batt^\wedge}}$. The adjustment of the submodels is made via battery voltage $U_{Batt,1}$, $U_{Batt,2}$, ..., via battery currents $I_{Batt,1}$, $I_{Batt,2}$, ..., if the battery voltage $[[^1]]$ is specified as an input variable and the battery current is specified as an output variable of the submodels.--.

Please amend the paragraph beginning at page 10, line 2 (and ending at page 10, line 14) of the Substitute Specification as follows:

-- The intervention in the electrical network by stimulator 16 takes place, for example, by specifying a new generator setpoint voltage ~~UGen,soll~~ $\underline{U_{Gen,soll}}$ (in the case of a vehicle generator), a load response time constant ~~taUGen~~ $\underline{tau_{Gen}}$ of a generator controller and/or by suitable users being switched on and off. By doing this, a battery current curve $I_{Batt}$, voltage curve $U_{Batt}$ [[and or]] <u>and/or</u> frequency curve, suitable for estimating the respective state variable Z or the respective parameter P may be impressed. Ideally, the desired battery current curve $I_{Batt}$ (or a voltage curve $U_{Batt}$) is specified in such a way that it transfers battery 3 into a working range A and excites it in a frequency range f, in which one of the submodels (e.g. submodel 5) which includes the estimating variable, is particularly accurate, and consequently the estimated variable is able to be determined very accurately. Naturally, in this context, the distance of this new working range from current working range A of battery 3 and the maximum admissible amplitudes of control variables $U_{Gen,soll}$, $tau_{Gen}$, $I_{Last}$ as well as the maximum permitted duration of the control intervention have to be taken into consideration.--.

Please amend the paragraph beginning at page 10, line 21 (and ending at page 10, line 28) of the Substitute Specification as follows:

--In step 22 it is checked whether the error variance $var_P$ is greater than a maximum error variance $var_{P,max}$. If not (N), stimulator 16 remains deactivated. If, for a time duration $t_P$, error variance $var_P$ remains greater than $t_{P,max}$ (step 23) and on the other hand greater than $var_{P,max}$, a current curve $I_{Batt,soll,P}$, that is assigned to parameter P, is impressed (step 24 and 26). This takes place until variance $var_P$ of parameter P is less than or equal to maximum variance $var_{P,max}$ of this parameter P or the duration of stimulation [[tstim]] $\underline{t_{stim}}$ is greater than a predefined maximum duration $t_{stim,max}$ (checking in step 27) The variable $t_{stim}$ for the duration of stimulation is increased iteratively in step 25 by respectively one scanning period $T_{Ab}$.--.

Please amend the paragraph beginning at page 11, line 21 (and ending at page 11, line 21) of the Substitute Specification as follows:

--$R_{i,k+1} = R_{i,k} \pm k_{11} (U_{Batt} - U_{Batt^\wedge}) + k_{21} (U_{Batt[[-]]\underline{\simeq}} - U_{Batt[[-]]\underline{\simeq^\wedge}})$--.

Please amend the paragraphs beginning at page 11, line 25 (and ending at page 11, line 33) of the Substitute Specification as follows:

--The value calculated from submodel 4 for internal resistance $R_i$ of battery 3 is supplied to second submodel 5 and may there be used as the initial value, for example. In this case, the weighting units for second submodel 5, having weighting factors [[k22]] $\underline{k_{22}}$ and [[k12]] $\underline{k_{12}}$, may be omitted. On the other hand, weighting units 10, 11, for the error feedback into submodel 4, remain in force.

It should be observed that, in loading operation, weighting factor [[11]] $\underline{k_{11}}$ should be set to zero, since first submodel 4 is not valid for loading operation. Weighting factors [[k11]] $\underline{k_{11}}$ and [[k21]] $\underline{k_{21}}$ may be determined, for example, via an observer design according to Luenberg or Kalman.--.